STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

ALASKA MARINE HIGHWAY SYSTEM/ GENERAL MANAGER

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Captain James H. Scheffer
National Transportation Safety Board
Office of Marine Safety
Washington, D.C. 20594

Dear Captain Scheffer:

I apologize for taking over 30 days to respond to your request for additional information to support the M/V Columbia investigation. The M/V Columbia is currently at Alaska Ship and Drydock in Ketchikan and the renovation of cabins and installation of a new switchboard are progressing slowly. We look forward to having our flagship back in operation this summer as I'm certain you look forward to completing this investigation.

I have assigned Captain Norm Edwards, Operations Manager and Mr. Phil Grasser, Marine Engineering Manager, to coordinate answers to your letter of January 17, 200 1. They have provided the following responses for each of the nineteen questions and have enclosed volumes of supporting information.

1. In regards to the type and quantity of fireman's outfits onboard at the time of the fire, there were seven (7) and were either small, medium or large. Each outfit included pants, coat, boots, gloves, helmet and airpac.

2. The initial response to the switchboard fire was by engineers on scene. They did not have fireman's outfits or SCBA's on while they responded to the electrical fire by securing and isolating vital machinery circuits and ventilation. Suits were not available to the engine room personnel in their effort to take initial action. The firefighting team responded in full firefighting gear and engineers evacuated the space.

3. During the interviews it was presented that the Chief Mate told crewmembers including engineers that were re-entering-the engine room that they needed appropriate firefighting outfits and equipment. He did not catch them all for some entered via another access to the engine room. The Chief Mate was at the staging area and on the car deck.

4. As licensed deck and engineering mariners, the USCG required that they have basic and/or advanced firefighting training. We copied all the training records regarding this for each and every crewmember and provided a

printout from our training database before your team left Juneau. The database showed who had completed what training, certification and qualifications and was hand delivered to NTSB with the records. A copy of the portions of our ISM manual that address fire and emergencies was also copied and delivered by our Safety Officer.

5. A copy of the Chief Mates position description is enclosed as attachment (1).

6. All of our vessels have designated backups for the Chief Mate if he is unavailable or incapacitated. As per the station bill, and position descriptions for second and third mates, see attachment (2), the next senior officer would take over the chief mate's billet in the event he was not able to fulfill his duties in an emergency. In the case of the fire party on scene, the next senior member of the firefighting team or boatswain would take over those duties.

7. All AMHS vessels hold weekly firefighting training. Simulated fire in the engine room drills are conducted occasionally when they do not interfere with the ship's operation, which is generally when ship is coming out of or going into maintenance of lay-up status. Even though the Columbia's training record doesn't show a simulated fire in the engine room drill in the past two years, engineers participate in every fire drill for two are members of the fire/emergency response team. Beside those assigned to the emergency response team, engineers on watch are responsible for taking initial action, securing ventilation and keeping essential equipment on the line unless they must evacuate the machinery space. The fire response team, fully outfitted with emergency response equipment, is designated to fight the fire.

8. The designated fire team assigned to fight fires in the engine room is the fire/emergency response team. The station bill assigns those crewmembers and a copy of the bill was given to NTSB on the second day of the investigation.

9. No risk assessment was done to determine whether there was a need for phones and/or alarms to be installed in the engine room when communication with the bridge could not be made from the engine control room. Ship's phone and sound powered phone systems are in the central room and when that was evacuated no other convenient means of communication with the bridge existed. This phone system was reviewed and approved by American Bureau of Shipping (ABS) and the U.S. Coast Guard. For information, as part of the already planned and scheduled over $10M M/V Columbia Public Space Upgrade federally funded modernization project, the ship is getting an entirely new state of the art SOLAS conforming public address and telephone system currently being installed. The details of these new installations are found in Section 6 of attachment (9) to this letter.

10. The Columbia has designated the yellow-marked space on the car deck near the emergency gear locker a fire lane. A similar problem existed on other AMHS vessels and the areas used by firefighters in an emergency have also been designated as fire lanes.

11. There were no procedures in place for the transfer of passengers and crew to another vessel prior to the Columbia fire. At the time of the incident, the Emergency Response Team (ERT) was assembled in the briefing room at the Headquarters DOT&PF building and maintained direct communications with the Master of M/V Columbia who had communications with the M/V Taku also. Prior to the evacuation of passengers and crew to the M/V Taku, a risk assessment was conducted between the Masters of M/V Columbia and M/V Taku and their plan was concurred with by the ERT per attachment (3). The situation and decision was logged in the ships log.

12. The reason that there was a four and a half hour delay until post accident (fire) drug and alcohol testing was that the crew was involved in fighting the fire, accounting for passengers, evacuating passengers and towing the Columbia out of danger. This was the earliest opportunity to logically conduct the tests and they were done in conjunction with the Coast Guard Inspectors arrival.

13. No training has been conducted for designated persons in the use of the drug test sample kit or the breathalyzer onboard any AMHS vessels. Future training will be conducted during Purser's training but the training syllabus is still being developed. Section IV of the AMHS Drug and Alcohol Policy describes urine specimen collections and alcohol testing and is attachment (4).

14. In a letter from Captain Kelly Mitchell, Alaska Marine Highway System (AMHS) Port Captain, to the U.S. Coast Guard in 1999, our position concerning work rest was addressed since the AMHS routes constitute an "overriding operational condition". Because of that position, the fact that two unlicensed deck personnel are required to handle each mooring line by union contract, the policy of manning AMHS vessels well in excess of the minimum required by the Certificate of Inspection and the longstanding, 35 years of safe operations, OCMI Juneau approved a waiver of the required rest periods specified by STCW section A-V1 1 1/ 1 as per the direction given in the letters in attachment (5). As per our concern with work/rest for AMHS crewmembers, the AMHS has formed a working group to review overtime practices aboard our vessels with the objective of meeting the requirements of STCW section A-V 1 1 1 / 1. AMHS has inquired about support from the U.S. Coast Guard Research and Development Center this summer in this study.

15. Procedures for accounting for passengers and crew during an emergency are written into the emergency checklists, which are accomplished by

sweeping the ship and reporting to the bridge. I have enclosed copies of the abandon ship and fire emergency checklists from our SMS manual attachment (6).

16. Engineering Policy 034 (switchboard maintenance) was implemented as per attachment (7). Also changes to the internal communications system are being made during the current shipyard. To improve emergency response, emergency flashlights and portable battery powered PA systems were purchased for all AMHS vessels.

17. The manufacturer of the fire detection system (heat and/or smoke) aboard the Columbia is Henschel Corporation a unit of General Signal Corp, Amesbury, MA. Dwg 55-124 identifies the unit installed. There is no model number available.

18. In regards to AMHS preventive maintenance program for all AMHS vessels the following documents are provided as attachment (8): Engineering Policy 001 (Reporting and Engineering Activities), SMS Manual Chapter 2.0 (Maintenance), M/V Columbia Maintenance Manual and the Columbia's work list for FYOO overhaul. AMHS does have a maintenance program for all vessels in the fleet. Each vessel developed their own maintenance program specific to all the equipment onboard the vessel. The maintenance tasks are also coordinated with ABS and U.S. Coast Guard periodic equipment and system inspection and testing requirements. The maintenance records are planned, recorded, and retained onboard each vessel according to AMHS policy defined in the ISM manual. The maintenance manual for the Columbia was developed by Bill Dunn the Chief Engineer, who has recently retired. The manual does address switchboard maintenance. The emergency switchboard maintenance was scheduled to be accomplished during the FYOO overhaul period according to the planning documents dated September 5, 1999.

Shoreside management does not centrally manage the maintenance program. The maintenance planning developed by the ships engineering department is oftentimes discussed with the port engineer and recommended changes are made. On the enclosed maintenance planning sheet for the main engines, you will notice notes where the port engineer cancelled maintenance item 16 and put a "maybe" beside maintenance item 17.

We are currently installing a computer maintenance planning system "Spectec-AMOS for windows" which will present the maintenance planning tasks in a uniform method throughout the fleet. With this future program, the central office will have the ability to monitor the maintenance efforts of the engineering department onboard all ships with the AMOS system installed. This system is due to be implemented on the first six ships in August of 2001 following over two years of vessel crew, shore maintenance, and contractor effort and over 500k of fleetwide investment.

19. AMHS shipyard specifications originate from two sources, State of Alaska overhaul projects and Federally funded refurbishment and vessel modernization projects. Shipyard contracts are generally a combination of work funded from both sources. An example of a typical quality assurance program for shipyard work is illustrated in documents enclosed as attachment (9).

Policy and guidance for quality assurance exists in three places. For development of refurbishment and modernization specifications, the guidelines are spelled out in the Statement of Services, Appendix B to each Request for Proposals Package. The guidelines in this document are used in monitoring an engineering consultant's development of the project Plans, Specifications and Estimates (PS&E) comprehensive documents. For administering a shipyard contract and monitoring the work of the contractor, guidelines are spelled out in AMHS General Provisions for Vessel Repair and Modernization, Section 0 and Section 1 of the Contract Specifications and in a Project Management Plan for each project.

The development of work specifications for federally funded work is done under the oversight of an AMHS Project Engineer. PS&E for each project is written by a Marine Engineering/Naval Architect Consultant Firm

Firms are selected based on evaluation of their proposals. Appendix B of the Request for Proposals spells out the Scope of the Required Design Services; Schedules and Coordination; Plans, Specifications & Estimate Assembly; Submittals and Reviews. Generally, several proposals are received and evaluated using the criteria set out in Part A of the Request for Proposals. After a consultant firm is selected the AMHS Project Engineer and the consultant firm Project Manager will refine the scope of work and specifically describe the work items to be accomplished. After a pricing agreement is reached AMHS will award a contract to the Engineering Consultant Firm to develop the PS&E for the agreed on work items. The Statement of Services (Appendix B) to the Request for Proposals becomes part of the contract. Quality assurance during the specification development process is achieved by following the guidelines in this Appendix. Work schedules, design reviews and submittal requirements are spelled out in the Appendix and serves as AMHS quality control during the development of PS&E.

Specifications for State funded repair work are developed by AMHS Port Engineers. These are generally maintenance items that are done on an annual basis or at specific intervals as determined by the U.S. Coast Guard or the ABS. For the most part these are standard specifications that were developed years ago and modified through time to suit the specific AMHS vessel. These include items such as dry-docking,

sandblasting and painting of the hull and underwater body, sea valve inspection, propeller and shafting inspection and removal, rudder inspection and removal, bow thruster inspection, and firefighting equipment inspections. The specifications for the State funded work are provided to the AMHS Project Engineer and made an addition to the federally funded **PS&E** as an Appendix (Copy of Contract Specifications with Appendices for the 1999-2000 Columbia Life Safety and Public Space Upgrades are attached).

The Final Contract Specifications are then competitively bid utilizing State of Alaska Procurement Regulations. A single contract is awarded to the successful shipyard bidder.

Quality assurance guidelines during the performance period of the contract are found in the General Provisions and in the Contract Specifications as stated above. The contract is administered by an AMHS Project Engineer (who may not always have been the Project Engineer during, the specification development phase of a project). The Project Engineer is on site for the duration of the performance period of the contract and serves as both the Administrator of the contract and the Quality Assurance Inspector overseeing the accomplishment of the work by the shipyard. He is assisted by at least one inspector (who is a licensed Marine Engineer from the AMHS fleet) and an AMHS Port Engineer. **Assignments,** authority and responsibilities for all senior AMHS personnel detailed to federal modernization projects are made by the AMHS General Manager in accordance with unique project assignment plans. Attachment (10) to this letter is a copy of the Assignment Plan for M/V Columbia's ongoing federal project.

Additionally, as a minimum, a Master and Chief Engineer are assigned to the vessel for the performance period of the contract. They assist in quality assurance inspections. Additionally the shipyard is tasked with providing quality assurance for their work and providing only work that is within general marine practice for vessel work, regulatory acceptance etc. These requirements are spelled out in the General Provisions and explicitly in the Contract Specifications.

I trust that this additional information will assist your team in completing the Columbia investigation. I look forward to hearing from you in the next few months. If there are any questions please don't hesitate contacting Captain Norm Edwards, Phil Grasser or me at 907 465-3955.

Sincerely,

Captain George Capacci
General Manager

Attachments:

(1) Chief Mate PD's
(2) 2nd and 3rd Mate PD's
(3) SMS Manual Chapter on ERT
(4) Drug and Alcohol Sampling Inst.
(5) Letters on Work/Rest Policy
(6) Emergency Check Lists
(7) Engineering Policy 034
(8) Engineering Policy 00 1. Etc.
(9) Shipyard Contracts, Etc.
(10) M/V Columbia Project Management Plan

cc: Captain Norm Edwards, Operations Manager
w/o Phil Grasser, Marine Engineering Manager
Ira Rosen, Vessel Construction Manager
Captain Lynn Melin, Port Captain
Jeff Hurst, Safety Officer